claims 4-20, which variously depend on claim 1, were rejected under 35 USC §103 as being unpatentable over *Adachi* in view of *Miyai* in further view of United States Pat. No. 6,370,936, issued to Yamagishi et al. (hereinafter *Yamagishi*). For the reasons set forth below, the Applicant respectfully traverses the rejection and respectfully submits that the pending claims defines patentable subject matter over the cited prior art.

The standard of patentability to be applied in obviousness rejections was enunciated by the Untied States Supreme Court in *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966), which established the factual inquiries to be considered in determining obviousness under 35 USC §103. Before answering *Graham's* content inquiry, it must be established that a patent or publication is in the prior art under 35 USC §102. (See MPEP 2141.01(I)). Only after the patent or publication has been determined to be within the prior art may the Examiner rely on the cited references to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, three basic criteria must be met by the Examiner. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or the references when combined) must teach or suggest all the claim limitations. (see MPEP §2143.03).

The presently claim invention is directed to a multi-component gas analyzing method using FTIR, and includes quantitatively analyzing a plurality of components in a sample based on in absorption spectrum obtained by FTIR, calculating multi-component concentrations from a mixed gas spectrum by using a quantitative algorithm, and after calculating the multi-component concentrations, correcting for a change in the spectrum due to a coexisting gas component within the sample. More particularly, the present invention enables the user to correct for the change in a spectrum due to coexisting gas by sampling a single point of data for each component or range. As result, it is possible to correct for an error caused by an intensity change in the spectrum itself which cannot be corrected by a normal quantitative algorithm and, consequently, to improve the precision of a gas analysis using FTIR.

The *Adachi* reference is directed to a quantitative analytical method and apparatus for determining a plurality of ingredients with spectrometric analysis. More specifically, the *Adachi* reference discloses establishing groups of ingredients to be measured suitable to plurality of kinds of samples to be measured, determining groups of wave number points corresponding to the respective groups of ingredients, storing the groups of wave number points, measuring the value of a sample of cross and absorption spectrum containing the groups of wave number points, using one of the groups of wave number points to calculate the concentration of values of the ingredients in the sample, determining if the calculated concentration of ingredients is appropriate for the group of wave number points used, and providing the concentration of the ingredients. Unlike the present invention which corrects for an error caused by an intensity change in the absorption spectrum to improve the precision of a gas analysis using FTIR, the *Adachi* reference fails to teach or suggest correcting for any change in the absorption spectrum. As a result, the method practiced in the *Adachi* reference fails to contemplate for a change in the measuring accuracy of a system due to a coexisting gas in the sample.

The *Miyai* reference is directed to a method for correcting the effect of coexistent gas in a gas analysis and gas analyzing apparatus using the same. The *Miyai* reference was filed in the United States Patent and Trademark Office on February 4, 2000. In contrast, the present application was filed in the United States Patent and Trademark Office on May 25, 2000 and claims priority to Japan Patent Application 11-158493, filed June 4, 1999, a certified copy of which was filed on July 13, 2000 and acknowledged in the Office Action Summary issued with the present Office Action. In light of the foregoing, the Applicants respectfully submit that the *Miyai* reference, which was filed after the priority date of the present application, is unavailable as prior art and may not be considered.

The *Yamagishi* reference is directed to a sampling apparatus for exhaust gas and includes a diluting tunnel for receiving exhaust gas as a sample gas and having an upstream side and a downstream side, a diluting air supply passage connected to the upstream side of the diluting tunnel and configured for providing diluting air to the

diluting tunnel to dilute the exhaust gas, a first flow meter disposed of a diluting air supply passage for measuring a flow rate of the diluting air flowing and the diluting air supply passage, a measuring passage connected to the downstream side of the diluting tunnel for receiving the diluted exhaust gas, a filter disposed on the measuring passage for capturing particulate matter in the diluted exhaust gas, a passage change over part disposed downstream of the first flow meter on the diluting air supply passage, a second flow meter disposed in the measuring passage for measuring a flow rate of the diluted exhaust gas flowing into the measuring passage, a passage change over part disposed downstream of the second flow meter on the measuring passage, and a bypass passage provided between the passage change over parts. Unlike the presently claim invention which discloses a multi-component gas analyzing method using FTIR, the *Yamagishi* reference fails to contemplate, teach or suggest calculating the multi-component concentrations for the mixed gas spectrum by using a quantitative algorithm and correcting for a change in the absorption spectrum due to a coexisting gas and gas sample.

The Applicants respectfully the *Miyai* reference is unavailable as prior art and may not be considered. Further, with respect to the *Adachi* and *Yamagishi* references, the Applicants respectfully submit that the Examiner has fail to show (1) that combining the cited prior art references would produce the presently claimed invention, and (2) there exist a motivation to combine the cited prior references to produce the presently claimed invention. Instead, the Applicant respectfully submits the Examiner has relied on insight in rejecting the presently claimed invention. "To prevent to use insight based on the invention to defeat patentability of the invention, this court requires the Examiner to show motivation to combine the references that create the case of obviousness. In other words, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior reference for combination in the manner claim." In re Rouffet 47 USPQ 2d 1453 (Fed Circuit 1998). "Combining prior art references without evidence of such as suggestion, teaching, or motivation simply takes the inventors disclosure as a blueprint for piecing together the prior art to defeat

patentability—the essences of insight." In re Bembiczak, 50 USPQ 2d 1614 (Fed Circuit 1999). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Since the cited references, alone or in combination, failed to teach or suggest all the elements of the presently claimed invention, they cannot be combined to yield the presently claimed invention. Moreover, the Applicant respectfully submits that the Examiner has failed to show a motivation to combine the cited references. For the foregoing reasons, the Applicant respectfully submits claims 1-20 are patentably distinct from the cited prior art references, either alone or in combination.

Conclusion

In view of the foregoing, it is submitted that all pending claims are now in condition for allowance. Allowance is respectfully requested.

If for any reason direct communication with Applicant's attorney would serve to advance prosecution of this case to finality, the Examiner is invited to call the undersigned attorney at the below listed telephone number.

The Commissioner is authorized to charge any fee which may be required in connection with this Amendment to deposit account No. 50-1901.

Respectfully submitted,

Dated: April 9, 2003

Brian F. Swienton
Registration No. 49,030

OPPENHEIMER WOLFF & DONNELLY LLP
840 Newport Center Drive, Suite 700
Newport Beach, CA 92660
Telephone: (949) 823-6000
Facsimile: (949) 823-6100